

Work Order ID 63656

Page 1

November 9, 2010 8:00:53 AM

Item ID: D6102-001

Accept



Setup

Start



Revision ID:

Item Name: Saddle Billet

Stop



Start Date: 11/09/10 Start Qty: 6.00



Cust Item ID:

Required Date: 11/23/10 Req'd Qty: 6.00



Customer:

Reference:

Approvals: Process Plan: CL

Date: 10/11/09 Tooling: _____ Date: _____

Run

Start



QC: _____

Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6102	Rev D								

100

0.00



PURCHASING

Purchasing

Memo

0.00

Issue P/O: 12888 a) Description: Alluminum billet b) 7.880" x 6.250" x 2.000" thick c) Tolerance on all dimensions are +0.006"/-0.000" d) Grain direction along 7.880" length e) Material: 6061-T6/T651 (QQ-A-250/11) or (QQ-A-200/8) f) Material certi

CL 10/11/09 (4)

110



Receive & Inspect for Damage & Mat'l Certs

0.00

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

CL 10/11/09 (5)

120



QC6- Inspect dimensions to drawing

0.00

QC

Memo

0.00

Quality Control

Check certification to Dwg D6102 for compliance

CL 10/11/24

6 - 88

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 63656

Page 2

November 9, 2010 8:00:53 AM

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Start Date: 11/09/10 Start Qty: 6.00



Cust Item ID:

Required Date: 11/23/10 Req'd Qty: 6.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



Packaging

Packaging

Identify as per dwg & Stock Location: MAT

0.00

ML 10/11/24

6 0

140



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

10/11/24 JJ

Memo

0.00

MF
10-11-24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

November 9, 2010 8:00:52 AM

Page 1

Work Order ID: 63656



Parent Item: D6102-001



Parent Item Name: Saddle Billet

Start Date: 11/09/10

Required Date: 11/23/10

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP A□01.05.04□New Issue □EC□

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6102-001P 6061-T6 6.25x7.88x2		Purchased	No			110	Each	0.0000	1	6		<i>11/09/10</i>	<i>E</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

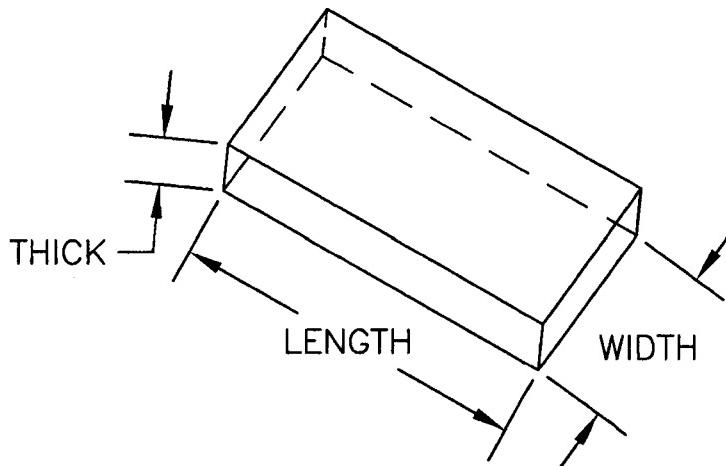
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN	DRAWN BY	PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	#	DRAWING NO. D6102
DATE			Rev. D SHEET 1 OF 1
06.06.30			TITLE SCALE NTS
A	01.03.30	NEW ISSUE	
B	03.10.20	ADD D6102-005/-007/-009	
C	04.08.25	ADD D6102-010/-011	
D	06.06.30	ADD D6102-013	

SPECIFICATION CONTROL DRAWING



RELEASED

06.08.15 #

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.06/-0.00), AND GRAIN DIRECTION AS SHOWN.

CL 10/11/09

W10: 63654

TOLERANCE ON ALL DIMENSIONS IS +0.06/-0.00.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6102-001	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.880	6.250	2.000	Along 7.880 Length
D6102-003	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.000	6.250	2.000	Along 6.000 Length
D6102-005	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	47.85	15.250	1.000	Along 47.85 Length
D6102-007	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.500	7.000	2.500	Along 7.500 Length
D6102-009	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	11.000	6.000	5.000	Along 11.000 Length
D6102-010	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.950	8.250	2.500	Along 7.950 Length
D6102-011	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	8.250	2.500	Along 6.500 Length
D6102-013	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	7.000	2.000	Along 6.500 Length

AMR 10/11/24

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO12888**

Purchase Order Date 11/09/10
PO Print Date 11/09/10

Page Number 1 of 1

Order From : VC-MET001

METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100
TORONTO, ON M4Y 3A5
CA

Contact Name	Buyer	Chantal Lavoie
Vendor Phone	Requisition Nbr	
Vendor Fax	Tax Resale Nbr	10127-2607
Vendor Account Nbr	Terms	Net 30
	Currency	CAD
	FOB	Destination-Collect

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAXED
(11/09/10)

Line Nbr	Reference Revision ID	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D6102-001P	6061-T6 6.25x7.88x2	11/23/10 Yes	6.00 Each	Yours ppd	\$39.7500	\$238.50

Special Inst: ALLUMINUM BILLET MATERIAL:
6061-T6/T651 AS PER QQ-A-250/11 OR
QQ-A-200/8
SIZE: 7.880" X 6.250" X 2.000" THICK
GRAIN DIRECTION ALONG 7.880"
LENGTH
TOLERANCE ON ALL DIMENSION ARE
+0.006"/-0.000"
B63656

PO Total: \$238.50

**MATERIAL CERTIFICATION
REQ'D UPON DELIVERY**

CJ
No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

Change Nbr: 1

Change Date: 11/09/10



Castle Metals®

A. M. Castle & Co.

PACKING SLIP

Page 1 of 1

Shipment No:576315

Ship From:	Sold To:	Ship To:	Deliver To:
Castle Metals MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA
Date Shipped	F.O.B.	Freight Terms	Carrier
18-NOV-10	ORIGIN	Prepaid	LOCAL_FLEET

Shipment Details	Final Destination Branch - MON
------------------	--------------------------------

Order No	Line No	Item No	Description
1105791	1	8641.MO	2.0000.PL.6061.T651.ALUMINUM.48.5000.144.5000 CUT 2SIDED TO 6.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 7.88")) X 7.88 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 7.88")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/11
Purchase Order No	Part Number	Ordered Qty	Invoice Qty
12888	YOUR ITEM NUMBER: D6102-001	6 PCS	6 PCS
Details	Mill	Heat Number	Mech Id
56688348		508959A4	PCS 6
Width (IN)	Length (IN)	Shipped Qty (LBS)	59.19

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

ark 10/11/24

SHIP TO:
A M CASTLE & CO
3400 NO. WOLF ROAD
FRANKLIN PARK, IL 60131

SOLD TO:
AM CASTLE & CO - SOLD TO
3400 NO. WOLF ROAD
FRANKLIN PARK, IL 60131

KAISER
ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

2/3

Serial Number

LAS

4198975

Item# 8041

CUSTOMER PO NUMBER:		WORK PACKAGE:	CUSTOMER PART NUMBER:		SHIP RUN/LOAD:		GOVT CONTRACT NUMBER:
56328		8641 AMC A96061-161		101835/17			
KAISER ORDER NO:	LINE ITEM:	SHIP DATE:	ALLOY:	CLAD:	TEMPER:	PRODUCT DESCRIPTION:	
1099347	1	9-JUL-2010	6061	BARE	T651	KaiserSelect® Precision Plate	
WEIGHT SHIPPED:	QUANTITY:	B/L NUMBER:	GAUGE:	DIAMETER/WIDTH:		LENGTH:	
11150 LB	8 PCS EST.	2028075	2.0000 IN	48.500 IN		144.500 IN	

Certified Specifications

AMS 4027/RevN
CMMMP 025/RevS

ASME SB 209/Rev2004

ASTM B 209/Rev07

Test Code: 1511

Test Results

PASS

Lot: 508904A0 Cast 785

Drop 09

Ingot 2

Controlled by CASTLE METALS - Mt.
to P & WC - MCL Manual Section FC-17

(ASTM E8/B557)
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	48.3 : 48.6 (333 : 335)	43.1 : 43.7 (297 : 301)	14.2 : 14.5

(ASTM E1251)

Chemistry:	Si	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.68	0.5	0.28	0.07	1.1	0.19	0.11	0.02	0.01	0.00	TOT 0.04

Lot: 508959A4 Cast 785

Drop 08

Ingot 2

(ASTM E8/B557)
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	49.5 : 49.5 (341 : 341)	44.3 : 44.7 (305 : 308)	14.6 : 14.7

(ASTM E1251)

Chemistry:	Si	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.70	0.6	0.30	0.09	1.0	0.20	0.14	0.02	0.01	0.00	TOT 0.04

10/11/124

